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09/760,299	01/16/2001	Bahadir Erimli	F0677	1868

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EXAMINER

SALAD, ABDULLAHI ELM I

ART UNIT PAPER NUMBER

2157

DATE MAILED: 05/20/2004

3

Please find below and/or attached an Office communication concerning this application or proceeding.

Handwritten signature

## Office Action Summary

**Application No.**

09/760,299

**Applicant(s)**

ERIMLI ET AL.

**Examiner**

Salad E Abdullahi

**Art Unit**

2157

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 April 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                                                        |                                                                                         |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                            | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

### DETAILED ACTION

1. This application has been reviewed. Original claims 1-20 are pending. The rejection cited stated below.

#### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rom et al., U. S. Patent No. 6,252,849 [hereinafter Rom] in view of Hendel et al., U.S. Patent No. 6,591,303 [hereinafter Hendel].

As to claim 1, Rom discloses a system that includes a network device (network switch 121) that controls communication of data frames between stations (105 and 109), a method comprising:

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- receiving a data frame on a first logic component (first input buffer )of the network device (switch 16) (see fig. 1 and col. 6, lines 30-51);
- transmitting the data frame to a second logic (output buffer 68) component on the network device, based on a destination address of the data frame (see fig. 3, and col. 4, lines 34-50);
- receiving the data frame at the second logic component (see fig. 3, and col. 4, lines 34-50);
- processing the data frame to generate frame forwarding information (see fig. 3, and col. 4, lines 34-50);
- transferring the frame forwarding information to an output buffer on the second logic component (see fig. 3, and col. 4, lines 34-50);
- detecting a condition on the second logic component (see the abstract and col. 1, lines 40-50); and
- transmitting the receive port information associated with the data frame to the first logic component, when the condition is detected (see col. 5, lines 5-29).

Rom, is silent regarding:

identifying receive port information associated with the data frame, the receive port information identifying a port on the first logic component on which the data frame was received, and transmitting the data frame and receive port information to a second logic component on the network device, based on a destination address of the data frame storing the receive port information on the second logic component.

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Hendel discloses a system that includes a network device that controls the communication between network stations including identifying receive port information (i.e., port of arrival information) associated with the data frame, the receive port information identifying a port on the first logic component on which the data frame was received, and transmitting the data frame and receive port information to a second logic component on the network device, based on a destination address of the data frame storing the receive port information on the second logic component (see col. 6, lines 60-62 and col. 7, lines 5-13). Therefore, it would have been obvious to one having ordinary skill in the art at time of the invention to incorporate the teaching of Hendel such as identifying receive port information associated with the data frame, the receive port information identifying a port on the first logic component on which the data frame was received into the system of Rom in order to prevent traffic from a particular input port from dominating the network device.

As to claim 2, Rom discloses the method of claim 1, wherein the detecting a condition includes detecting a congestion condition associated with a resource involved in at least one of processing and forwarding the data frame on the second logic component, the method further comprising: performing, by the first logic component, a congestion control-related operation in response to receiving the receive port information (see col. 5, lines 5-29).

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As to claim 3, Rom discloses the method of claim 2, wherein the performing a congestion control-related operation comprises: transmitting a pause frame via the port identified by the receive port information (see col. 5, lines 5-29).

As to claim 4, Rom discloses the method of claim 1, wherein the transmitting the data frame and the receive port information to the second logic component includes transmitting the data frame and the receive port information together in a single frame, the single frame including a field identifying the receive port information (see col. 3, lines 26-32 and col. 5, lines 5-29).

As to claim 5, Rom discloses the method of claim 1, further comprising: discarding the receive port information associated with the data frame after transferring the frame forwarding information to the output queue, when the condition is not detected (see col. 5, lines 5-29).

As to claim 6, Hendel discloses the method of claim 1, wherein the processing and transferring associated with a plurality of data frames are performed in a same order as which the receive port information for the respective plurality of data frames is stored by the second logic component (see col. 6, lines 42-59).

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At to claim 7, Rom discloses a network device including a plurality of logic devices coupled together to control communication of data frames between stations, comprising:

a first logic device (see fig. 2) comprising:

a plurality of ports configured to receive data frames from the respective stations, and first data frame processing logic configured to (see fig. 2 and col. 4, lines 7-38):

receive a data frame from a first station, the data frame having a destination address associated with a second logic device col. 4, lines 7-38),

a second logic device (output buffer 305) comprising:

a register configured to store receive port information associated with data frames received from the first logic device (see fig. 3 and col. 4, lines 34-50) , and second data frame processing logic configured to:

receive the data frame and receive port information (see fig. 3 and col. 4, lines 34-50), store the receive port information in the register, generate frame forwarding information for the data frame (see figs. 2 and 3 and col. 4, lines 7-40) , determine whether a condition exists with respect to a resource involved in a processing the data frame (see col. 4, lines 41-65), and

send a signal to the register when the condition exists, the signal indicating that the register is to output receive port information associated with the data frame to the first logic device (see col. 5, lines 5-29).

Rom, is silent regarding:

identifying receive port information associated with the data frame, the receive port information identifying a port on the first logic component on which the data frame was received, and transmitting the data frame and receive port information to a second logic component on the network device, based on a destination address of the data frame storing the receive port information on the second logic component.

Hendel discloses a system that includes a network device that controls the communication between network stations including identifying receive port information (i.e., port of arrival information) associated with the data frame, the receive port information identifying a port on the first logic component on which the data frame was received, and transmitting the data frame and receive port information to a second logic component on the network device, based on a destination address of the data frame storing the receive port information on the second logic component (see col. 6, lines 60-62 and col. 7, lines 5-13). Therefore, it would have been obvious to one having ordinary skill in the art at time of the invention to incorporate the teaching of Hendel such as identifying receive port information associated with the data frame, the receive port information identifying a port on the first logic component on which the data frame was received into the system of Rom in order to prevent traffic from a particular input port from dominating the network device.

As to claim 8, Rom discloses the network device of claim 7, wherein the condition relates to a congestion condition associated with the resource (see col. 5, lines 5-29).



As to claim 9, Rom discloses the network device of claim 8, wherein the first logic device is further configured to: receive the receive port information from the second logic device, and perform a flow-control related operation with regard to the port identified by the receive port information (see col. 5, lines 5-29).

As to claim 10, Rom discloses the network device of claim 9, wherein the flow-control related operation comprises transmitting a pause frame via the port identified by the receive port information (see col. 5, lines 5-29).

As to claim 11, Rom discloses the network device of claim 7, wherein the register outputs receive port information corresponding to an oldest entry stored in the register in response to receiving the signal (see col. 4, lines 33-50).

As to claim 12, Rom discloses the network device of claim 7, wherein the second logic device further comprises: a plurality of output queues corresponding to ports on the second logic device, wherein the second data frame processing logic is further configured to: output frame forwarding information to one of the plurality of output queues (see fig. 2 and col. 4, lines 7-17); and  
send a second signal to the register when the condition does not exist, the second signal indicating that the register is to discard the receive port information associated with the data frame (see col. 5, lines 4-29).

As to claim 13, Rom discloses the network device of claim 12, wherein the register discards receive port information corresponding to an oldest entry in the register in response to receiving the second signal (see col. 5, lines 4-29).

As to claim 14, Rom discloses the network device of claim 7, wherein the second data frame processing logic processes data frames in a same order as which the corresponding receive port information is stored in the register (see col. 4, lines 33-50)..

As per claim 15, Ron discloses a system comprising a plurality of devices (122, 121, and 123) configured to control communication of data frames between stations (15, 107, and 109), comprising:

a first device configured to receive a data frame having a destination address associated with a second device (see figs. 2 and 3 and col. 4, lines 7-50); and  
a second device configured to receive the data frame, process the data frame to generate frame forwarding information for the data frame (see figs. 2 and 3 and col. 4, lines 7-50), determine whether a congestion condition exists on the second device (see col. 4, lines 41-50), the congestion condition relating to a resource involved in at least one of processing and forwarding the data frame to its destination, and transmit the data frame to the first device when the congestion condition exists (see col. 5, lines 5-29).

Rom, is silent regarding:

identifying receive port information associated with the data frame, the receive port information identifying a port on the first logic component on which the data frame

was received, and transmitting the data frame and receive port information to a second logic component on the network device, based on a destination address of the data frame storing the receive port information on the second logic component. Hendel discloses a system that includes a network device that controls the communication between network stations including identifying receive port information (i.e., port of arrival information) associated with the data frame, the receive port information identifying a port on the first logic component on which the data frame was received, and transmitting the data frame and receive port information to a second logic component on the network device, based on a destination address of the data frame storing the receive port information on the second logic component (see col. 6, lines 60-62 and col. 7, lines 5-13). Therefore, it would have been obvious to one having ordinary skill in the art at time of the invention to incorporate the teaching of Hendel such as identifying receive port information associated with the data frame, the receive port information identifying a port on the first logic component on which the data frame was received into the system of Rom in order to prevent traffic from a particular input port from dominating the network device.

As per claim 16, Hendel discloses the system of claim 15, wherein the first device is further configured to: receive the receive port information from the second device, and perform a flow control-related operation with respect to a port identified by the receive port information (see col. 6, lines 21-59).

As to claim 17, Rom disclose the system of claim 16, wherein when performing a flow control-related operation, the first device is configured to: generate a pause frame requesting suspension of data traffic, and transmit the pause frame via the port identified by the receive port information, without transmitting the pause frame via other ports on the first device (see col. 5, lines 4-29).

As to claim 18, Rom discloses the system of claim 15, wherein the second device comprises:

a first-in, first-out (FIFO) device (FIFO output buffer 305) configured to store receive information for a number of data frames (see fig. 3 and col. 4, lines 34-50); and flow control logic (buffer counter 307) configured to transmit a signal to the output buffer when the congestion condition is detected (see col. 4, lines 41-50) and wherein the output buffer outputs the receive port information corresponding to a data frame associated with the congestion condition, in response to receiving the signal (see col. 5, lines 5-29).

As to claim 19, Rom discloses the system of claim 15, wherein the second device comprises: a first-in, first-out (FIFO) device (FIFO output buffer 305) configured to store receive port information for a number of data frames (see col. 3, lines 33-56); and a plurality of output queues corresponding to ports on the second device (see fig. 2 and col. 4, lines 7-17), the second device being further configured to: output the frame forwarding information to one of the plurality of output queues (see col. 3, lines 33-56),

and wherein the second device processes data frames received from the first device in a same order as which the receive port information for the respective data frames is stored in the FIFO device, such that when the frame forwarding information is output to one of the output queues, an oldest entry in the FIFO device relates to the frame forwarding information being output to the output queue (see fig. 3, and col. 4, lines34-50).

As to claim 20, Ron discloses the system of claim 15, wherein the second device comprises: a first-in, first-out (FIFO) device (FIFO output buffer 305) configured to store the receive port information for a number of data frames, the second device being further configured to: transmit an oldest entry in the FIFO device to the first device when the congestion condition exists (see fig. 3, and col. 4, lines34-50).

### ***Conclusion***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Salad E Abdullahi whose telephone number is 703-308-8441. The examiner can normally be reached on 8:30 - 5:00. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on 703-305-4792. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

6. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Abdullahi Salad  
Examiner Au 2157  
5/15/2004